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DR. JAMES G. COOPER.

On the nineteenth of July, Dr. Cooper, a man prominent in the scientific history of Western America, died at his home in Haywards, California. For nearly fifty years he labored with zeal and earnestness for the advancement of zoölogical knowledge. Trained as a physician and for years engaged in the practice of his profession, he yet found time for work of lasting value in the domain of naturestudy. He suffered from ill health for many years, yet as one of the pioneers in the western field, his name will be held in grateful remembrance for what he has done in zoölogical science.

His father, William Cooper, one of the founders of the Lyceum of Natural History, now the New York Academy of Sciences, was eminent as a naturalist. From him Dr. Cooper received the early training which in large measure prepared him for his later career.. Born in New York, June 19, 1830, James commenced his school life at the age of ten years, while living with his family on a farm near Hoboken, N. J. On his way to school it was his delight to collect birds or shells or anything else in animate nature which he might find, thus showing those traits which were afterward a dominating factor in his life work. Later he studied medicine, and received his degree from the College of Physicians and Surgeons of New York in After two years spent in the city hospitals, he was appointed physician on a government survey for a railroad between St. Paul and Puget Sound. A part of his duty was to make zoölogical and botanical collections, and in this way he began the observations and discoveries for which the scientific world is permanently indebted to During the succeeding years he spent most of his time in col-

lecting on the Pacific coast. In 1855, after the abandonment of the survey, he was at Gray's Harbor, then at Whitby's Island, then for six weeks in the Santa Clara Valley, in California, after which he went to Panama to collect shells for his father, who wrote the article on West Coast Shells for the Pacific R. R. Reports. Until 1860, Dr. Cooper continued his field work on the Pacific coast, much of the time at his own expense. In that year he was appointed Zoölogist of the California State Geological Survey under Whitney. While engaged in this work, he collected along the coast from San Diego to Bolinas, as well as inland. His observations on the land birds were embodied in the report on Ornithology, edited by Professor Baird and justly regarded as "by far the most valuable contribution to the biography of American birds that has appeared since the time of Audubon." (Baird.) Dr. Cooper's report on Conchology still remains in manuscript form in the library of the University of California. This report contains information of the highest value, especially in its voluminous notes on geographical distribution.

Through the latter part of the Civil War, Dr. Cooper served as surgeon in the Second Cavalry, California Volunteers. In 1866, at Oakland, California, he married Miss Rosa M. Wells. His later life was spent in the practice of his profession, until, with failing health, he retired to Ventura county, then in 1875 to Haywards. Although no longer as active in collecting as in earlier years, his scientific work was continued with the ripe experience and knowledge of zoölogy which the years had brought him. Some of his later work was done for the State Mining Bureau in the identification of fossils, in the description of new species, and in the publication of a Catalogue of Californian Fossils. For the Academy of Sciences also, of which he was an early member and at one time vice-president, he performed valuable service, both in conchology and in palæontology. Some ot his latest papers were based on material collected by members of the Academy.

Dr. Cooper published more than forty papers on conchology between 1859 and 1896. His discoveries of new species and varieties of mollusks were numerous. Of the 116 new forms credited to him, 65 were described by Dr. Philip P. Carpenter, 16 by W. M. Gabb, 17 by Dr. Cooper himself, and the remainder by William Cooper, Gould, Bland, Newcomb and Tryon. It is noticeable that so few were described by Dr. Cooper. Owing to a lack of scientific books

and authenticated collections in California, he sent most of his new species to more favored workers for description. Dr. Carpenter says of the species collected by Dr. Cooper: "The diagnoses... publisd in the Proc. Cal. Ac. N. S..., should be credited to the zealous zoölogist of the survey, rather than to the mere artist-inwords who endeavors to represent their forms to the reader." Dr. Cooper described a few species collected by other workers in the field, but of these there is no enumeration at hand.

Dr. Cooper was a man of noble character and kindly disposition. He was tall and slender, not very fluent in conversation unless the topic under discussion was one of special interest to him. Many of the younger students of zoölogy in California remember with gratitude his aid so freely given them in their studies. Since his death, besides extended notices in the daily papers, there have appeared a memorial by Wm. H. Dall in Science for August 15, and one by W. O. Emerson, together with a list of ornithological papers, in the current number of the Condor. The last is the Bulletin of the Cooper Ornithological Club and contained in its first issue, 1899, a much longer account of Dr. Cooper's life work. A partial list of his conchological papers will be found in Bulletin 4, California State Mining Bureau. The present portrait is from a photograph taken in 1865, and was sent to the writer by Mrs. Cooper, who still lives WILLIAM J. RAYMOND. in Haywards.

University of California, Oct. 15, 1902.

NOTICES OF NEW JAPANESE LAND SNAILS.

BY H. A. PILSBRY AND Y. HIRASE.

Mr. Nakada, who collected so successfully in the Bonin Is. (Ogasawara-jima), has now gone into western Hondo, through the provinces Echizen and Kaga, and continuing northward will collect in Noto and Sado Island. Among many other interesting discoveries, he has found Sphyradium edentulum Drap. (new to eastern Asia), Bifidaria plicidens Bs. (described from India), magnificent specimens of Eulota (Euhadra) senckenbergiana, one of the finest helices in the world, and many other beautiful shells.